

081102

2017 5

4

3-6

180

5

1

2

3

4

5

1.

1.1

1.2

1.3

1.4

2.

2.1

2.2

2.3

2.4

3. /

3.1

3.2

3.3

4.

4.1

4.2

4.3

5.

5.1

5.2

6.

6.1

6.2

6.3

6.4

7.

7.1

7.2

7.3

8.

8.1

8.2

8.3

9.

9.1

9.2

9.3

10.

10.1

10.2

10.3

11.

11.1

11.2

11.3

12.

12.1

12.2

1.

2.

CAD

5

28

15.56%

		1	4.5	1
		2	4.5	2
			2.5	3
			2.5	2
			2	4
			2.5	2
			4	3
			3.5	3
			2	6
			28	

60.25

33.47%

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			2.5	5
			2	7
			3	5
			2.5	6
			2.5	6
			3	7
			1.5	7
			1.5	7
			1.5	6
			2	7
			2	5
			2	5
			60.25	

39.75

22.08%

			2	5
			2	4
			1.5	6
			1.5	6
			2	7
			1	5
			1	2
			1	4
			1	4
			4	8
			12	8
			2	1
			1	3
			2	7
			0.5	3
			0.5	5
			0.5	3
			0.75	

46.5

25.83%

			3	1
			2	2
			3	5
			6	6
			2	1-7
			2	-
			0.5	5
			4	1-4
			1	3
			1	-
			2	-
			12	1-4
			()	4
			4	-
		46.5		

										1	2	3	4	5	6	7	8		
	D902191011			2	36				36										
	D902191021			2	27				27										
	E902191033			1	13				13										
	E902191043			1	27				27										
	E902191053			1	16				16										
	E902191063			2	35				35										

D902031073

TRIZ

										1	2	3	4	5	6	7	8		
	D801091031	1		4.5	72			72		72									
	D801091041	2		4.5	72			72			72								
	D801091081			2.5	40			40			40								
	D801091071			2.5	40			40			40								
	D030102121			2	32			32				32							
	D030102041			2.5	40			40			40								
	D030102010			4	64	24		40				64							
	D803141042			3.5	56	24		32				56							
	D030101011			2	32			32						32					
					28	448	48	0	400										
		D904042051	1		1.5	32		14	18		32								
		D904042061	2		1.5	32		14	18			32							
		D030102011	CAD		4	64		24	40				64						
		D030101071			1	16			16		16								
		D805062013			2	32	8		24				32						
		D030101021			1	16			16					16					
		D030102021			4.5	72	12		60				72						
		D030102051			2.5	40		8	32				40						
		D030101191			3	48			48					48					
		D030102061			2	32			32						32				
		D030101031			2	32			32						32				
		D030102221			2	32	8		24				32						

										1	2	3	4	5	6	7	8		
	D030101231			4	64			64					64						
	D030101051																		

									1	2	3	4	5	6	7	8	
	D030101113		1.5	24			24							24			
	D030101123		1.5	24			24							24			
	D030101133		1.5	24			24								24		
	D030101163		1.5	24			24								24		
	D030101173		1.5	24			24							24			
	D030102253		1.5	24			24						24				
	D030101203		1.5	24			24							24			
	D030101213	*	0.5	8			8								8		
	D030101223		1.5	24			24					24					
	D030101233		1.5	24			24								24		
	D030102243	Matlab	1	16			16						16				
	D030103253		1.5	24			24								24		
			5.5	88			88										
	D030103161		2	2													
	D030102161		2	2													
	D030101042		1.5	1.5													
	D030101043		1.5	1.5													
	D030101044		2	2													

										1	2	3	4	5	6	7	8		
	D030101045			1	1														
	D030101039			1	1														
	D030101040			1	1														
	D030101052			1	1														
	D030104211			2	2														
	D805074012			1	1														
	D030101303			2	2														
	D030101046			4	4														
	D030101047			12	12														
				34															
	D908195011																		5
	D908195021																		
	D908195031																		2
	D908195041																		4
	D909195012																		

1